

REMARKS**INTRODUCTION:**

In accordance with the foregoing, claims 1, 7, 12, 18 and 28 have been amended. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-5, 7-12, 14-18, 20-33, 35-40, 42-45, and 47-53 are pending and under consideration. Reconsideration is respectfully requested.

OBJECTIONS TO THE DRAWINGS:

In the Office Action, at page 2, numbered paragraph 2, the drawings were objected to under 37 CFR 1.83(a).

It is respectfully submitted that it is clear from FIG. 1 and paragraph [0018] of the specification that movable bar 104 is I-bar-shaped and is axially moved in opposite directions (slidably inserted) under the guide of a channeled rail 105 (half-I-bar-shaped lengthwise slot).

For clarity, claim 1 has been amended to recite, in part:

a control unit controlling an opposite directional movement of the movable body in a multi-stage manner such that the refrigerator door is maintained at a selected one of a plurality of predetermined positions between a closed position and a fully open position, wherein the movable body is provided with a plurality of grooves formed along a longitudinal side surface thereof, and the grooves are formed along one upper side of a separate longitudinal movable bar comprising an I-bar-shaped member that is slidably inserted into a channeled guide rail comprising a half-I-bar shaped lengthwise slotted rail ~~in a longitudinal side surface of the movable body.~~

Claim 28 has been amended in similar fashion.

Hence, it is respectfully submitted that the separate I-bar-shaped member 104 that is slidably inserted into a half-I-bar shaped lengthwise slotted rail 105 (channeled slot) of claims 1 and 28 is shown in FIG. 1 and described in paragraph [0018] of the specification, and further described in paragraphs [0023]-[0024], for example.

Therefore, the outstanding drawing objections should be resolved, and no changes to the drawings should be required.

Reconsideration and withdrawal of the outstanding objections to the drawings are respectfully requested.

REJECTION UNDER 35 U.S.C. §112:

A. In the Office Action, at pages 3-4, numbered paragraph 6, claims 1-5, 7-12, 14-17, 28-33, 35-40 and 42-44 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. This rejection is traversed and reconsideration is requested.

It is respectfully submitted that FIG. 1 clearly shows the I-bar-shaped member 104 and a half-I-bar shaped lengthwise slotted rail 105. It is respectfully submitted that it is not necessary that the application describe the claim limitations exactly, but only so clearly that persons of ordinary skill in the art will recognize from the disclosure that appellants invented processes including those limitations. In re Wertheim, 191 USPQ 90, 96 (CCPA 1976). Similarly, "[the specification] need only be reasonable with respect to the art involved; they need not inform the layman nor disclose what the skilled already possess. They need not describe the conventional... The intricacies need not be detailed ad absurdum." General Electric Co. v. Brenner, 159 USPQ 335 (D.C. Cir. 1968).

Claims 1 and 28 have been amended to show more clearly that the movable body of the present invention is provided with a plurality of grooves formed along a longitudinal side surface thereof, and the grooves are formed along one upper side of a separate longitudinal movable bar comprising an I-bar-shaped member that is slidably inserted into a channeled guide rail comprising a half-I-bar shaped lengthwise slotted rail.

It is respectfully submitted that the orientations of the I-bar-shaped member 104 and a half-I-bar shaped lengthwise slotted rail 105 are clear from FIG. 1, and are further understood by paragraphs [0018] and [0023]-[0024] of the specification, for example.

Accordingly, it is respectfully submitted that it would have been clear to one of ordinary skill in the art, after review of the present invention that a control unit controls an opposite directional movement of the movable body in a multi-stage manner such that the refrigerator door is maintained at a selected one of a plurality of predetermined positions between a closed position and a fully open position, wherein the movable body is provided with a plurality of grooves formed along a longitudinal side surface thereof, and the grooves are formed along one upper side of a separate longitudinal movable bar comprising an I-bar-shaped member that is slidably inserted into a channeled guide rail comprising a half-I-bar shaped lengthwise slotted rail, as is recited in amended claim 1 and similarly in amended claim 28.

Thus, it is respectfully submitted that amended claims 1 and 28 comply with the written description requirement under 35 U.S.C. §112, first paragraph. Since claims 2-5, 7-12, 14-17, 29-33, 35-40 and 42-44 depend from amended claims 1 and 28, respectively, claims 2-5, 7-12,

14-17, 29-33, 35-40 and 42-44 comply with the written description requirement under 35 U.S.C. §112, first paragraph, for at least the reasons that amended claims 1 and 28 comply with the written description requirement under 35 U.S.C. §112, first paragraph.

B. In the Office Action, at page 4, numbered paragraph 7, claims 1-5, 14-17, 28-33, 35-40 and 42-44 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. This rejection is traversed and reconsideration is requested.

Claims 1 and 28 have been amended to show more clearly that the movable body of the present invention is provided with a plurality of grooves formed along a longitudinal side surface thereof, and the grooves are formed along one upper side of a separate longitudinal movable bar comprising an I-bar-shaped member that is slidably inserted into a channeled guide rail comprising a half-I-bar shaped lengthwise slotted rail.

It is respectfully submitted that the orientations of the I-bar-shaped member 104 and a half-I-bar shaped lengthwise slotted rail 105 are clear from FIG. 1, and are further understood by paragraph [0018] of the specification as well as paragraphs [0023]-[0024], for example.

For example, in paragraph [0018], it states: "A longitudinal movable bar 104 is axially arranged in the leg casing 103 such that the bar 104 is axially moved under the guide of a channeled rail 105 in opposite directions. A longitudinal side surface of the movable bar 104 is uneven, with four grooves 10a, 10b, 10c and 10d formed along the uneven surface of the bar 104 at regular intervals. The channeled guide rail 105 is axially installed in the leg casing 103 to hold the movable bar 104 and to guide any axial movement of the bar 104. A hinge bracket 106 is mounted to the door 102. A curved link bar 107 is hinged at a first end thereof to an end of the movable bar 104, and at a second end thereof to the hinge bracket 106 at a position spaced apart from a rotating axis of the door 102 by a predetermined distance in a radial direction from the rotating axis." (emphasis added). As is clear from FIG. 1, the longitudinal movable bar 104 (an I-bar-shaped member) is inserted into the channeled guide rail 105 (a half-I-bar shaped lengthwise slotted rail).

Hence, it is respectfully submitted that amended claims 1 and 28 comply with the enablement requirement under 35 U.S.C. §112, first paragraph. Since claims 2-5, 14-17, 29-33, 35-40, and 42-44 depend from amended claims 1 and 28, respectively, claims 2-5, 14-17, 29-33, 35-40, and 42-44 comply with the enablement requirement under 35 U.S.C. §112, first paragraph, for at least the reasons that amended claims 1 and 28 comply with the enablement requirement under 35 U.S.C. §112, first paragraph.

C. In the Office Action, at page 4, numbered paragraph 9, claims 1-5, 7-12, 14-18, and 20-27 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to

particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection is traversed and reconsideration is requested.

The preambles of independent claims 1 and 18 have been amended to show more clearly that the invention is a combination, that is, a refrigerator having a refrigerator door and a door control device for the refrigerator.

Thus, amended claims 1 and 18 are submitted to be definite and in allowable form under 35 U.S.C. §112, second paragraph. Since claims 2-5, 7-12, 14-17, and 20-27 depend from amended claims 1 and 18, respectively, claims 2-5, 7-12, 14-17, and 20-27 are definite and in allowable form under 35 U.S.C. §112, second paragraph for at least the reasons that amended claims 1 and 18 are definite and in allowable form under 35 U.S.C. §112, second paragraph.

REJECTION UNDER 35 U.S.C. §103:

In the Office Action, at pages 5-7, numbered paragraphs 12-14, claims 18, 20-27, 45, and 47-53 were rejected under 35 U.S.C. §103(a) as being unpatentable over Han (Korean Patent 1020040021444 A; hereafter, Han) in view of Sparkman (USPN 6,711,778; hereafter, Sparkman). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

As admitted by the Examiner, Han does not expressly disclose the movable body with grooves formed along a longitudinal side, a control unit comprising a locking unit that is biased by an elastic member into the grooves of the movable body, and the dampening unit comprising an elastic support unit.

It is respectfully submitted that Han teaches a refrigerator with a plurality of control devices, wherein a spring control device provides a force to close the door when the door is opened sufficiently to stretch the spring. In addition, Han teaches a moving bolt part control device with a nut groove and a door stopper that serves as a stopper wall by contacting an end of the moving bolt to stop the rotation of a door (see Han, Abstract).

Sparkman teaches a door stop apparatus that includes a block secured to a vehicle and a bar extending through a generally horizontal bore in the block, wherein the bar is secured to a vehicle door and includes stop recesses spaced apart from each other. The bar extends through a cylinder a generally vertical bore in the block and the cylinder includes a biased roller which extends sequentially into the stop recesses on the bar to provide intermediate stops for the vehicle door, wherein the cylinder pivots or rotates in the bore as the door moves (see Sparkman, Abstract).

In contrast, paragraph [0018] of the specification of the present invention recites that the control unit is described as: "(A) longitudinal movable bar 104 is axially arranged in the leg casing 103 such that the bar 104 is axially moved under the guide of a channeled rail 105 in opposite directions (emphasis added)." That is, the present invention teaches extending the movable bar in a longitudinal (axial) fashion, not utilizing a movable bar with a plurality of stop recesses, wherein the bar extends through a bore of a cylinder and pivots or rotates with the cylinder as the door moves, as is taught by Sparkman, which teaches away from the present claimed invention by utilizing a movable bar with a plurality of stop recesses, wherein the bar extends through a bore of a cylinder and pivots or rotates with the cylinder as the door moves.

Hence, even if combined, Han and Sparkman do not teach or suggest independent claims 18 and/or 45.

Thus, independent claims 18 and 45 are submitted to be patentable under 35 U.S.C. §103(a) over Han (Korean Patent 1020040021444 A) in view of Sparkman (USPN 6,711,778), alone or in combination. Since claims 20-27 and 47-53 depend from claims 18 and 45, respectively, claims 20-27 and 47-53 are patentable under 35 U.S.C. §103(a) over Han (Korean Patent 1020040021444 A) in view of Sparkman (USPN 6,711,778), alone or in combination, for at least the reasons that claims 18 and 45 are patentable under 35 U.S.C. §103(a) over Han (Korean Patent 1020040021444 A) in view of Sparkman (USPN 6,711,778), alone or in combination.

EXAMINER'S RESPONSE TO ARGUMENTS:

In the Office Action, at page 7, numbered paragraph 15, the Examiner provided his arguments that Applicant's arguments with respect to claims 18 and 45 are moot in view of the new grounds of rejection.

Applicant's arguments regarding the new grounds of rejection are presented above. Applicant submits that the above arguments and amendment of claim 18 place claims 18 and 45 in form for allowance.

Applicant respectfully submits that, in contrast to the present claimed invention (see description of present claimed invention above), Cherry teaches a biasing mechanism of a refrigerator that includes a spring connected to provide biasing force in the desired directions at the appropriate degrees of door opening and an arm and roller arrangement which compliments the action of the spring (see Cherry, Abstract). Hence, it is respectfully submitted that Cherry teaches away from the present claimed invention.

Hence, it is respectfully submitted the present claimed invention is patentable over Cherry.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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